

What is claimed is:

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1. A dermal composition comprising a blend of:
- (a) a polymer composition of two or more polymers which includes:
 - (i) a first acrylic-based polymer having a first functionality and solubility parameter; and
 - (ii) a second acrylic-based polymer having a second functionality and solubility parameter, wherein the first and second functionalities differ in the amount and type of functional groups to provide an acrylic-based polymer combination having a net functionality proportional to the ratio of the first and second acrylic-based polymers used, and are present in proportions to provide a net solubility parameter; and
 - (b) a therapeutically effective amount of one or more drugs incorporated into the polymer composition.
2. A dermal composition as claimed in claim 1, wherein the first acrylic-based polymer has a functionality which provides a lower drug solubility than the second acrylic-based polymer.
3. A dermal composition as claimed in claim 2, wherein the first acrylic-based polymer is present in an amount to provide a flux of the one or more drugs in the dermal drug delivery composition which is greater than a composition based solely on the second acrylic-based polymer.
4. A dermal composition as claimed in claim 2, wherein the amount of the second acrylic-based polymer is in the range of 5-95 weight % and the amount of the first acrylic-based polymer is

in the range of 95 to 5 % by weight, all based on the total dry weight of the polymer.

5. A dermal composition as claimed in claim 2, wherein the amount of the second acrylic-based polymer is in the range of 20-75 weight % and the amount of the first acrylic-based polymer is in the range of 75 to 20 % by weight, all based on the total dry weight of the polymer.

6. A dermal composition as claimed in claim 2, wherein the first acrylic-based polymer has substantially no functional groups and the second acrylic-based polymer has functional groups.

7. A dermal composition as claimed in claim 6, wherein the second acrylic-based polymer has carboxyl and/or hydroxy functional groups.

8. A dermal composition as claimed in claim 6, wherein the second acrylic-based polymer is present in an amount to provide a increased saturation concentration in the dermal drug delivery composition which is greater than a composition based solely on the first acrylic-based polymer.

9. A dermal composition as claimed in claim 6, wherein the functional groups are provided by monomer units containing functional groups which are incorporated into the second acrylic-based polymer in an amount of from 0.1 to 20 % by weight, based on the dry weight of the second acrylic-based polymer.

10. A dermal composition as claimed in claim 9, wherein the functional monomers are incorporated into the second acrylic-based polymer in an amount of from 0.1 to 8 % by weight, based on the dry weight of the second acrylic-based polymer.

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11. A dermal composition as claimed in claim 1, wherein the at least two polymer polymers contain substantially only the first and second acrylic-based polymers.

12. A dermal composition as claimed in claim 7, wherein the second acrylic-based polymer includes carboxyl functional groups.

13. A dermal composition as claimed in claim 12, wherein the one or more drug includes haloperidol.

14. A dermal composition as claimed in claim 13, wherein the carboxyl functional acrylic-based polymer includes 0.1 to 10 % by weight of carboxyl functional monomer units.

15. A dermal composition as claimed in claim 14, wherein the carboxyl functional acrylic-based polymer is a crosslinked vinyl acetate acrylic-based polymer.

16. A dermal composition as claimed in claim 12, wherein the one or more drug includes nicotine.

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17. A dermal system as claimed in claim 16, wherein the carboxyl functional acrylic-based polymer includes 0.1 to 12 % by weight of carboxyl functional monomer units.

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cont

18. A dermal system as claimed in claim 16, wherein the carboxyl functional monomer units are acrylic acid.

19. A pressure-sensitive dermal drug delivery composition as claimed in claim 3, wherein the first acrylic-based polymer includes a first functional group and the second acrylic-based polymer includes a second functional group, wherein the first and second functional groups are different.

20. A pressure-sensitive dermal drug delivery composition as claimed in claim 19, wherein the first functional group is a hydroxy functional monomer unit and the second functional group is a carboxyl functional monomer unit.

21. A dermal composition as claimed in claim 20, wherein the one or more drug includes clonidine.

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22. A dermal system as claimed in claim 21, wherein the carboxyl functional acrylic-based polymer includes 0.1 to 12 % by weight of carboxyl containing monomer units and the hydroxy functional acrylic-based polymer includes 0.1 to 10 % by weight of hydroxy containing monomer units.

23. A dermal system as claimed in claim 21, wherein the carboxyl containing functional monomer units are acrylic acid, and the hydroxy containing monomer units are 2-hydroxy ethyl acrylate.

24. A dermal system as claimed in claim 6, wherein the drug includes scopolamine.

25. A dermal system as claimed in claim 24, wherein the second acrylic includes carboxyl groups and the first acrylic includes no or substantially no functional groups.

26. A method of producing a dermal composition, comprising the steps of:

(1) producing a blend of:

(a) a polymer composition of two or more polymers which includes:

(i) a first acrylic-based polymer having a first functionality and solubility parameter; and

(ii) a second acrylic-based polymer having a second functionality and solubility parameter,

wherein the first and second functionalities differ in the amount and type of functional groups to provide an acrylic-based polymer combination having a net functionality proportional to the ratio of the first and second acrylic-based polymers used, and are blended in proportions to provide a net solubility parameter; and

(b) a therapeutically effective amount of one or more drugs incorporated into the polymer composition;

(2) forming the blend into a polymer matrix; and

(3) drying the polymer matrix to remove the solvent system to form the dermal composition.

27. A method as claimed in claim 26, wherein the first acrylic-based polymer has a functionality which provides a lower solubility parameter than the second acrylic-based polymer.

28. A method as claimed in claim 26, further comprising the step of applying a backing material to one side of the composition, the backing material being substantially impermeable to the drug contained therein.

29. A method as claimed in claim 28, further comprising the step of applying a release liner to a surface of the composition opposite said backing material.

30. A method of controlling the flux of a drug from a dermal drug delivery composition, comprising the steps of:

(a) selecting at least two polymer polymers which includes:

(i) a first acrylic-based polymer having a first functionality and solubility parameter; and

(ii) a second acrylic-based polymer having a second functionality and solubility parameter,

wherein said first and second functionalities differ in the amount and type of functional groups to provide a polymer combination having a net solubility of one or more drugs within the composition proportional to the ratio of the first and second acrylic-based polymers used;

(b) combining the at least two acrylic-based polymers with a therapeutically effective amount of one or more drugs to form the dermal drug delivery composition,

wherein the one or more drugs have a flux which is determined by the net solubility in the composition and is different than the flux of a composition produced solely from said first or second acrylic-based polymers alone.